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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,505	02/01/2002	Sudhendu Rai	D/A1472 (1508/3540)	8789

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EXAMINER

POON, KING Y

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/052,505	<b>Applicant(s)</b> RAI ET AL.	
	<b>Examiner</b> King Y. Poon	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35, 52-55 and 59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 59 is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-35 and 52-55 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, 7, 9, 17-24, 26, 28, 35, 54, 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerlach et al. (US 5,469,532).

Regarding claims 1, 6, 35: Gerlach discloses a method of the printing of a job/document (column 9, lines 10-15) from a computer with a printer, the printer having a printer processor (col. 5 lines 3-8) that is not in the computer (column 5, lines 20-21, column 9, lines 1-13), the method comprising: the computer generates instruction data (document created, column 8, lines 5-15, column 9, lines 60-67, column 12, lines 10-12; inherently document contains instruction of how the document is to be printed and from that the system would be able to determined what is being used) sufficient to cause the printer to print the plural pages of document (col. 8 lines 27-45 and col. 9 lines 8-13, fig. 3A-3C), the instruction data comprising instruction data required to print a current page and at least one subsequent page (inherent for printing multiple pages document); the computer generates, by derivation from the instruction data required to print the at least subsequent page, resource information indicative of printer processor resources

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required by the printer to print at least one subsequent page (column 10, lines 29-35, column 12, lines 9-15); sending the instruction data required to print the current page to the printer (fig. 3A-3C) required to print the current page to the printer processor together with resource information indicative of printer processor resources required by the printer to print at least one subsequent page (column 10, lines 25-67, column 11, lines 35, the document file and the resource must be given to the printer before the printer can start printing; the printer does not need all the file, but must have at least the current page that is to be printed (inherent)); scheduling printer processor resources for printing the current page and at least one subsequent page in accordance with the resource information; (Gerlach discloses that the job is printed with resources used as scheduled col. 9 lines 12-13); and printing the document with the printer processor resources as scheduled.

Note: the first information processing structure is the program and system memories, buses, etc that generates the document command that are used to detect the required resources of column 8, lines 10-15; the second information processing structure is the program and system memories, buses, etc that generates and correlates the printing command with the resources, column 10, lines 29-67.

Regarding claim 2: Gerlach discloses that instruction data is provided as at least one of page description language (PDL) and job control language (JCL) (e.g., RPLs, column 10, lines 15-20, column 14, lines 5-10; document file data inherently are job control language because it controls how the print job is to be printed).

Regarding claim 3: Gerlach discloses that resource information can be provided as an annotation to the PDL and/or JCL, in Gerlach's device resources required for printing are gathered and placed into a resource store together with the RPL data (render primitives list), which are formed from PDL data (col. 10 lines 29-33). Also see fig. 3A-3C)

Further, after resource information is generated, the resource information is annotated to the instruction data (col. 10 lines 29-33, fig. 3A-3C).

Regarding claim 4, Gerlach discloses that a common information processing structure carry out the steps of generating instruction data and resource information and then annotating the instruction data with the resource information (col. 10 lines 28-33).

Regarding claim 7: Gerlach discloses that the second information structure (the resource assembler; col. 10 lines 28-33) be located in an information path for instruction data from the first information processing (the application program, col. 9 line 67) structure to the printer (figure 2, where resource assembler 208 is between application program 204 and printer 226). Further, since the second information processing structure takes the output of the first information processing structure as input, and the printer engine takes as input the output of the second information processing structure, it would be obvious to a person of ordinary skill in the art that the second information processing structure must lie in between the first information processing structure and the printer engine (A outputs to B, which outputs to C; therefore B must be in between A and C).

Regarding claim 9: Gerlach discloses that a discrete structure, receives instruction data as input, in Gerlach's system the resource assembler receives instruction data in the form of PDL data from the application program, and outputs instruction data with resource information (col. 10 lines 28-33). In Gerlach's system instruction data in the form of RPL data is output from the resource assembler along with resources required for printing (col. 10 lines 28-33).

Regarding claims 17-24, 26, 28, 54, 55: Please see discussion of claims 1-6, 7, 9.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 8, 25, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Snipp (US 5,699,495).

Regarding claims 5, 25: Gerlach discloses all the limitations of claim 4, from which claim 5 depends.

Gerlach further discloses that the structure that performs the operations of the common information processing structure must lie in between the application program, which originally generates PDL data and the printer, to which instruction data and resource information will ultimately be sent (col. 9 line 66 - col. 10 line 33). Gerlach does

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not disclose expressly that the common information processing structure be the printer driver.

Snipp discloses that the printer driver lies between the application program and the print device (figure 2., where application program 26 connects to print device 14 through print driver 388) to provide device driver instructions for the printer.

Gerlach and Snipp are combinable because they are from the same field of endeavor. At the time of invention it would have been obvious to a person of ordinary skill in the art to use the print driver of Snipp to perform the functions of the resource assembler taught by Gerlach (col. 10 lines 28-33), because it would provide a single focal point for instructions for document printing.

Regarding claims 8, 27: Gerlach discloses all the limitations of claim 7, from which claim 8 depends.

Gerlach further discloses that the structure that performs the operations of the second information processing structure must lie in between the application program, which originally generates PDL data and the printer, to which instruction data and resource information will ultimately be sent (col. 9 line 66 - col. 10 line 33).

Gerlach does not disclose expressly that the second information processing structure be the printer spooler.

Snipp discloses that the printer spooler lies between the application program and the print device (figure 2, where application program 26 connects to print device 14 through print spooler 35).

Gerlach and Snipp are combinable because they are from the same field of endeavor. At the time of invention it would have been obvious to a person of ordinary skill in the art to use a print spooler taught by Snipp for the resource assembler taught by Gerlach (col. 10 lines 28-33), because it would provide for more flexible and complex print scheduling.

5. Claims 10, 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Motoyama (5,319,748).

Regarding claims 10, 29: Gerlach discloses all the limitations found in claim 3 from which claim 10 depends.

Gerlach does not disclose expressly that the instruction data and resource information be specified in the form of comments, and that prior to sending data to the printer, the comments are filtered to extract resource information.

Motoyama discloses using comments to distinguish "various resources" (col. 2, line 39).

Gerlach and Motoyama are combinable because they are from the same field of endeavor. At the time of invention it would have been obvious to a person of ordinary skill in the art that the resource information could be placed in comments with the instruction data.

The motivation of Gerlach's system is to get the resource information to the printer prior to printing, so the allocation of resources can be planned and printing is not slowed (col. 11 lines 12-15 and col. 16 lines 25-27).



Since Gerlach's system is communicating resource information, and it is known from Motoyama (col. 2 line 39) that resource information is provided in comments, it would be obvious to use the comments as a means of sending resource information to the printer because it would greatly simplify resource information communication.

Although Gerlach does not disclose filtering comments for resource information, he does disclose filtering the PDL data to determine what resources are required (col. 10 lines 29-31). Since Motoyama discloses that PDL data may contain resource information in comments it would be obvious that the combination of Gerlach's system with Motoyama's would provide filtering of comments.

6. Claims 11-13, 15, 16, 30, 31, 32, 33, 34, 52, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlach in view of Motoyama in further view of Siegel (5.678,133) and Motoyama (EP 0 538 059).

With respect to claims 11-13, 30, 31, 32: Gerlach and Motoyama, do not disclose expressly where the comments are located in the headers PDL or JCL when they are sent to the printer.

Siegel discloses that "page properties" are embedded in the PDL header, which is sent to the printer (col. 6 lines 55-57).

Motoyama (EP) discloses that resource information can be posted at "the beginning of each distinct document segment" (abstract lines 6-8).

Gerlach and Motoyama and Siegel and Motoyama (EP) are combinable because they are from the same field of endeavor.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to send resource information from the computer to the printer in the form of comments in the PDL, as Motoyama describes, and to have the information located in a header of the PDL, as described by Siegel.

The motivation for doing so would have been to get resource information to the printer prior to transmitting data to be printed as the header gets to the printer first.

All the resource information can be sent in one header at the beginning of the PDL as described by Siegel (col. 6 lines 55-57) or resource information could be sent at the "beginning of each distinct document segment" as described in Motoyama (EP) (abstract lines 6-8).

Therefore, it would have been obvious to combine Siegel with Gerlach and Motoyama and Motoyama (EP) to obtain the invention as specified in claims 11-13.

Regarding claims 15, 16, 33, 34: As previously discussed, resource information is provided when there are resources required for printing.

Therefore, it would have been obvious that there are no resource information provided on the first page if there are no resources required.

Regarding claim 52: Please see discussion of claim 11-13 and the claims they depend on.

Gerlach teaches the resource information must be presented and learn by the printer first to prevent printer stall (column 11, lines 10-15, column 13, lines 55-60, column 5).

Regarding claim 53: Gerlach discloses using a PDL (col. 10 lines 29-31).

***Allowable Subject Matter***

7. Claim 59 is allowed.
8. Claim 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

9. Applicant's arguments filed 4/3/2006 have been fully considered but they are not persuasive.

With respect to applicant's argument that the examiner provides no adequate rationale as to why one of ordinary skill in the art would modified Gerlach to include a print spooler instead if index pointer; has been considered.

In reply: the examiner has not suggested modifying Gerlach to include a print spooler instead if index pointer. The examiner is suggesting to include in the structure of computer to include a spooler for storing print data, such that the print data would not be lost before being transferred to the printer, which is well-known in the art.

With respect to applicant's argument that the cited references does not teach filter the comment to determine resource information; has been considered.

In reply: the meaning of "filter" is being interpreted as a device/software that would take an input data of A, B, C etc to extract A.

Gerlach clearly teaches filter the document instruction to extract resource information (column 8, lines 30-35). Since the modification of Gerlach by the teaching of Motoyama requires the resource information located in the comment, there is no way the resource information would be extracted if comment is not filtered.

Since Gerlach's system is communicating resource information, and it is known from Motoyama (col. 2 line 39) that resource information is provided in comments, it would be obvious to use the comments as a means of sending resource information to the printer because it would greatly simplify resource information communication by using a known and proven method of sending resource information. The user would know the method would work and reliable because the method is widely used by others as taught by Motoyama. Since the method is widely used, it would ensure the invention of Gerlach to be usable with other system. It would also save the user of Gerlach a lot of effort in trying to figure out (research) how to send the resource information and allowed the printer that is already on the market to be able to detect the sent resource information (ensure Gerlach invention is usable).

With respect to applicant's argument that nothing in Siegel to indicate the header of the current pages includes resource data for a subsequent page, has been considered.

In reply: since the resource of page 1 would be the same as the resource of page 2 as taught by Gerlach, column 16, lines 25-30; in such case, the header of current page includes resource data for a subsequent page.

Note: since the applicant states that there are no subcombination (newly amended) includes that includes a limitation not found in a corresponding considered claims; the subcombination claims are rejected for the same reason as discussed in considered claims.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

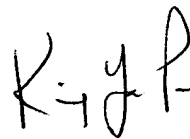
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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 8, 2006

A handwritten signature in black ink, appearing to read 'K. Y. Poon'.

**KING Y. POON  
PRIMARY EXAMINER**